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2. Patent application number
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3. Full name, address and postcode of the or of each applicant *(underline all surnames)*

ORANGE PERSONAL COMMUNICATIONS SERVICES LIMITED
St James Court
Great Park Road
Almondsbury, Bristol BS12 4QJ
United Kingdom

Patents ADP number *(if you know it)*

06490320003

If the applicant is a corporate body, give the country/state of its incorporation

United Kingdom

4. Title of the invention

MOBILE COMMUNICATIONS

5. Name of your agent *(if you have one)*

R.G.C. Jenkins & Co

"Address for service" in the United Kingdom to which all correspondence should be sent *(including the postcode)*

26 Caxton Street
London
SW1H 0RJ
United Kingdom

Patents ADP number *(if you know it)*

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Country	Priority application number *(if you know it)*	Date of filing *(day / month / year)*

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Signature R.G.C. Jenkins & Co — Date 4 December 1997

12. Name and daytime telephone number of person to contact in the United Kingdom

Mr Jerome Spaargaren
0171 931 7141

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MOBILE COMMUNICATIONS

This invention relates to mobile communications, and more particularly but not exclusively to apparatus for use in a mobile communications system such as a GSM (Global System for Mobile communications) digital cellular radio network, and to a method of providing a message service to a user of such a mobile communications system.

A conventional GSM network is schematically illustrated in Figure 1. A mobile switching centre (MSC) 2 is connected via communication links to a number of base station controller (BSCs) 4. The BSCs 4 are dispersed geographically across areas served by the mobile switching centre 2. Each BSC 4 controls one or more base transceiver stations (BTSs) 6 located remote from, and connected by further communication links to, the BSC 4. Each BTS 6 transmits radio signals to, and receives radio signals from, mobile stations 8 which are in an area served by that BTS 6. That area is referred to as a "cell". A GSM network is provided with a large number of such cells, which are ideally contiguous to provide continuous coverage over the whole network territory.

A mobile switching centre 2 is also connected via communication links to other mobile switching centres in the remainder of the mobile communications system 10, and to a public service telephone network (PSTN), which is not illustrated. The mobile switching centre 2 is provided

with a home location register (HLR) 12 which is a database storing subscriber authentication data including the international mobile subscriber identity (IMSI) which is unique to each mobile station 8. The IMSI is also stored in the mobile station in a subscriber identity module (SIM) along with other subscriber-specific information.

The mobile switching centre 2 is also provided with a visitor location register (VLR) 14 which is a database temporarily storing subscriber authentication data for mobile stations which are active in the area served by the mobile switching centre 2.

The mobile switching centre 2 may also be provided with a subscriber location register (SLR) 18 which is a database storing data relating the HLRs and VPSs of the network with the network's subscribers.

The GSM network supports a variety of services. One such service is an answerphone service. The answerphone service, among other services, is implemented on a Voice Processing System (VPS) 16. The VPS 16 is linked to the mobile switching centre 2. Incoming calls to the MSC 2 which are not answered by a called subscriber are automatically forwarded to the VPS 16. Figure 1 only illustrates a single VPS 16. However, a mobile communications network generally comprises several VPSs 16 each serving a plurality of subscribers. Various implementations of the answerphone service are possible, of which one example is described below.

The answerphone service provides a personal mailbox for each subscriber to the answerphone service. When a call is directed to a subscriber's mailbox, a personal message of the subscriber is played to the caller. The caller may then leave a voice message in the mailbox. The subscriber is notified by a GSM short message that a message has been deposited in the subscriber's mailbox. The subscriber can then access his/her mailbox in order to retrieve the message.

A call to the subscriber which is not answered is automatically forwarded to the answerphone service and the called subscriber's telephone number is used to access the subscriber's mailbox. However, a call to the subscriber may not only be forwarded if the called subscriber is busy, out of coverage or does not answer, but also if the subscriber's elects, via an option on the handset, to have the call forwarded to his mailbox. Such a call is referred to as a conditionally diverted call. The subscriber can elect which calls, i.e. the calls from which callers, are to be diverted. The subscriber has to specify a telephone number where a call is to be diverted to. That telephone number may be a telephone number which subscribers commonly use to access the answerphone service.

The directory number (MSISDN) of the subscriber to which the call is directed is transmitted as the CLI (calling line identity) on diversion of a call from the subscriber's handset. The CLI, being unique for each subscriber, can be used by the VPS to access the subscriber's mailbox.

If a subscriber wants to access the answerphone service in order to retrieve a message from his/her mailbox, the subscriber dials the common telephone number of the answerphone service on his/her handset. The retrieval call can be automatically forwarded to the subscriber's mailbox by using the CLI. An incoming retrieval call can be distinguished from a conditionally diverted call by the lack of a divert flag which is set on diversion and transmitted to the answerphone service.

If a subscriber wants to access his/her mailbox from abroad, i.e. outside the coverage area of the home network (referred to as a "roaming" subscriber), the call is directed to the answerphone service via the visited network. However, no CLI is transmitted and the subscriber is not forwarded automatically to his/her mailbox. Rather, the mailbox number has to be entered manually to identify the mailbox from which a call is to be retrieved. The VPS then automatically enters a message retrieval mode.

It would be desirable to provide an enhanced answerphone service which is more flexible in its use, for example in relation to calls for which the correct CLI is unavailable.

According to one aspect of the present invention, there is provided apparatus for use in a mobile communications system, said mobile communications system being arranged to establish a communications link with said apparatus on receipt of a call from a user who is to receive a message service from said apparatus relating to a mobile subscriber, said

mobile subscriber being associated with an identification code, said apparatus comprising means for prompting said user for said identification code if said identification code is unknown by said apparatus; means responsive to receipt of said identification code for selecting said mobile subscriber to which the message service will relate; means responsive to receipt of a selection indicator from said user during said call; and means for providing a first message service to said user in the absence of receipt of said indicator, or a second message service on receipt of said indicator.

Accordingly, the apparatus may be arranged such that the user is only required to enter the correct identification code of the mobile station if that information is not automatically known to the apparatus. In the same procedure, the user can select between two different message services, by either supplying the apparatus with the selection indicator or not.

In accordance with an embodiment of the invention, the apparatus provides an answerphone service for receiving and storing a voice message from the user, and for retrieving a stored voice message and providing the retrieved voice message to the user. The answerphone service comprises a mailbox which is associated with the mobile subscriber by said identification code. The user may either retrieve a voice message from the user's personal mailbox, or deposit a message in another subscriber's personal mailbox.

For example, if the subscriber is abroad, the diversion telephone number of the answerphone service is generally specified as an international

telephone number, including a common international address prefix, as for example "+44" for the UK. A conditionally diverted call is forwarded to the home network via a visited network using this international telephone number. The CLI is generally lost when a call originating in a visited network is transmitted to the home network. Accordingly, though a diverted call is forwarded to the answerphone service using the international diversion number, the subscriber's mailbox cannot be accessed automatically by the VPS without the CLI. With an embodiment of the present invention, the user enters the required identification code for the VPS to access the subscriber's mailbox.

Furthermore, using the present invention, a conditionally diverted call of international origin can be distinguished from an international retrieval call even though the visited network may not transmit a divert flag. Accordingly, although an incoming international conditionally diverted call may initially automatically be treated in the same manner as an incoming international retrieval call, the caller may enter an indicator when message deposit is desired or vice-versa.

Thus, the first message service may either be a message retrieve mode or a message deposit mode. The second message service is then the other of those modes. Accordingly, the user can select between retrieving a message from or depositing a message on the answerphone service.

Alternatively, the first message service may be the provision of a message intended specifically for the subscriber of the mobile station from which the call is made, or the provision of a message intended specifically for a different subscriber. The second message service then is the provision of the message for the different subscriber or the message for the subscriber of the mobile station from which the call is made, respectively. The message for the subscriber may further be followed by the retrieval of a voice message from the selected mailbox, and the provision of the voice message to the user.

This enables an arrangement in which a subscriber is able to use another subscriber's handset to retrieve a message from his/her mailbox, whilst the retrieval call is otherwise automatically forwarded to the mailbox associated with the subscriber of the used handset.

Preferably, the identification code corresponds to a telephone number.

Preferably, the selection indicator is generated by the user pressing a key on the keypad of the telephone. The user may then simply switch between the first and second responses by pressing the key.

According to another aspect of the present invention, there is provided a method of providing a message service to a user of a mobile communications system on receipt of a call from said user, wherein said message service relates to a mobile subscriber associated with an identification code, and said message service comprises a first message service provided on receipt of a selection indicator by said user during said

call, or a second message service provided in the absence of receipt of said indicator, said method comprising prompting said user for said identification code if said identification code is required to provide said message service; selecting between said first and said second message service in dependence on receipt of said indicator; and providing the selected message service to said user.

According to a further aspect of the present invention, there is provided apparatus for use in a mobile communications system, said apparatus being adapted to store messages for subsequent retrieved by a subscriber of the mobile communications system wherein said apparatus is adapted to identify a first subscriber making a call to retrieve a message by means of an identification signal automatically forwarded to said apparatus during call establishment, said signal identifying the equipment being used by said subscriber, and wherein said apparatus is further adapted to identify a second subscriber, on receipt of a request from said second subscriber during said call, by means of other information supplied by said second subscriber during said call. This allows a flexible access to the message services regardless of whether or not the user's own mobile station is used for message retrieval.

According to another aspect of the present invention, there is provided apparatus for use in a mobile communications system, said mobile communications system being arranged to establish a communications link

with said apparatus in response to a call by a user, said apparatus being responsive during said call to receipt of a response selection indicator, and to receipt of a number of identification codes each being associated with different mobile subscribers, wherein said apparatus is arranged to select one of said mobile subscribers and/or to select one of a plurality of predetermined responses if said response selection indicator is received, and otherwise to automatically provide a particular response relating to one of said mobile subscribers. This enables the user readily to select which response is to be provided in respect of which mobile subscriber if desired.

An embodiment of the present invention will now be described, by way of example only, with reference to the accompanying drawings in which:

Figure 1 is a block diagram of a mobile communications network;

Figure 2 is a flow diagram showing steps taken by the VPS when receiving a call in accordance with the embodiment of the present invention;

Figure 3 is a flow diagram showing steps taken by the VPS when depositing a message on a national call in accordance with the embodiment of the present invention;

Figure 4 is a flow diagram showing steps taken by the VPS when retrieving a message on a national call in accordance with the embodiment of the present invention; and

Figure 5 is a flow diagram showing steps taken by the VPS when depositing or retrieving a message on an international call in accordance with the embodiment of the present invention.

Figure 1 shows a conventional mobile communications network. The mobile communications network is described in detail hereinabove and will not be repeated. The answerphone service and the service module in accordance with the embodiment of the present invention are implemented on the VPS 16. However, alternatively, the service module may also be provided outside the VPS 16 as a separate station with links to the VPS 16 and the MSC 2.

Figure 2 illustrates the steps taken by the service module in the VPS 16. After a call is received in step 20, the service module checks in step 22 whether the incoming call is a diverted call, i.e. whether a divert flag in the communications protocol from the MSC 2 is set. Such information is only available if the subscriber uses his/her handset within the home network area, i.e. if the subscriber's handset communications with the MSC 2 via the BTSs 6 and the BSCs 4 rather than via a visited network. In the case of a set divert flag, the service module proceeds to the normal deposit mode in step 24 as is described hereinbelow in connection with Figure 3. If the divert is not set, the service module checks in step 26 whether the incoming call is provided with the CLI information. If this is the case, it can be assumed that the called is a subscriber who calls from inside the home network and wishes to retrieve a

message from the answerphone service. Accordingly, the service module proceeds to the normal retrieval mode at step 28 which is described in connection with Figure 4.

If the CLI is unknown, the service module checks in step 30 whether the number of the mailbox to be accessed is known. This may be the case if the mailbox number was previously entered by the caller and the call subsequently is diverted to another VPS due to a call drop back. This is because a single VPS does not provide the answerphone for all subscribers. Rather, each of a plurality of VPSs provides the answerphone for a fraction of all subscribers. In a situation where a call is forwarded to a VPS to be proceeded to the answerphone service although the mailbox to be accessed is managed by another VPS, the current VPS identifies the correct VPS via the SLR 18 and MSC 2 (Figure 1) and redirects the call to the correct VPS. Situations where a call drop back may occur are described hereinafter.

Accordingly, in the case of a call drop back, the mailbox number is contained in the called address. In this case, the service module proceeds to step 32 and checks whether the caller is abroad, i.e. whether the called address indicates a call of international origin. An international call is then processed in the international mode at step 34, whereas a national call is processed in the normal retrieval mode at step 36. The service module proceeds the call to step 36 if a call by a subscriber to his/her mailbox from a national phone other than his/her handset is redirected to another VPS due to a call drop back.

If no mailbox number is detected in step 30, the service module generates a prompt in step 38 for the caller to enter into his/her telephone the number of the mailbox to be accessed. There are two types of incoming calls that are processed in step 38. The first type is a call originated abroad from a subscriber who wishes to retrieve a message from the answerphone service. The second type is a call to a subscriber abroad, which call is diverted to the answerphone service via a visited network without setting the divert flag or providing the CLI or a mailbox number.

After reception of a number which has been entered by the caller into his/her telephone in step 40, the service module checks in step 42 whether the entered number is a valid mailbox number. Preferably, the mailbox number corresponds to the called or calling subscriber's mobile telephone number. If no valid mailbox number has been entered, the service module returns to step 38. Otherwise, the service module proceeds to step 44 and checks whether the mailbox corresponding to the entered mailbox number is managed by a different VPS and, in that case, causes a call drop back at step 46. If the mailbox is managed by the same VPS, the call is proceeded to the international mode in step 48.

Figure 3 shows the steps taken by the service module in the normal deposit mode. A set divert flag at step 22 in Figure 2 indicates that a call has arrived at a subscriber's handset within the home network area but has subsequently been diverted to the VPS. However, the subscriber's CLI is not

necessarily available since the subscriber has the option to preset his/her handset not to transmit the CLI. Accordingly, the service module checks in step 50 whether the CLI is available. If the CLI is available, the CLI is used in step 52 to identify the subscriber's mailbox number. If no CLI is available, the service module prompts the caller in step 54 to enter the mailbox number, receives the mailbox number in step 56 and verifies in step 58 whether a valid number has been entered. The identified/entered mailbox number is used to access the subscriber's mailbox in step 60. The service module then plays a personal deposit message by the subscriber to the caller in step 62 and receives a voice message from the caller in step 64.

Figure 4 shows the steps taken by the service module in the normal retrieval mode. The service module proceeds to the normal retrieval in three cases. The first and second case are shown in Figure 2. In the first case, the received call is not diverted and is provided with the CLI. Accordingly, in this case, the call has a national origin and is directed to a common telephone number which is provided by the network operator. The second case results from a call drop back if a subscriber has entered his/her mailbox number to access his/her mailbox via a national telephone other than his/her handset. In the third case, the normal retrieval mode is activated if the caller presses the star key of his/her telephone in the international mode which is described in more detail in connection with Figure 5.

The normal retrieval mode starts with the playing of a retrieval message to the caller in step 66. The retrieval message may comprise a retrieval message which allows the user to select from various services such as the retrieval of particular ones of the messages on a subscriber's mailbox, the deletion of messages, etc. If the star key of the caller's telephone is pressed during the playing of the retrieval message as indicated at step 68, the service module proceeds to step 70 and prompts the user to enter a mailbox number which is desired to be accessed. The service module receives a number in step 72 and checks in step 74 whether the entered number is a valid mailbox number. If the entered number is invalid, the service module returns to step 70. Otherwise, it checks in step 76 whether the mailbox associated with the entered mailbox is provided in the current or in a different VPS. In the former case, the service module returns to step 66. In the latter case, the service module initiates a call drop back in step 78.

If the star key has not been pressed in step 68, the service module checks in step 80 whether a mailbox number is available. Only if no mailbox number is available, the CLI is used to obtain the mailbox number in step 82. This is to prevent that a wrong mailbox is accessed if a subscriber uses another subscriber's handset to access his/her mailbox, namely the mailbox associated with the CLI and not the mailbox associated with an entered mailbox number. In step 84, the service module prompts the caller to enter a PIN code in order to get authorised access to a mailbox. The PIN code is

received in step 86. If the star key is pressed at this stage in step 87, the service module proceeds to step 70. Otherwise, the entered PIN code is checked for validity in step 88. Step 84 is repeated if the entered PIN code is invalid, whereas the mailbox is accessed in step 90 on entry of a valid PIN code. The service module then proceeds to step 92 and plays the message to be retrieved to the calling subscriber.

Figure 5 illustrates the steps taken by the service module in the international mode. The international mode either provides for the deposit of messages for a subscriber by a caller, or proceeds to the normal retrieval mode and thereby indirectly provides also for the retrieval of messages by a subscriber. As illustrated in Figure 2, the international mode is activated in two cases. In the first case, an international address prefix in the called address is detected in step 32. In the second case, no divert flag is set and neither the CLI nor a mailbox number are available. In this case, the call either originates from abroad, or a subscriber uses a national phone other than his/her handset to access the answerphone service. Although this is not actually an international call, the call is considered as such since the same steps are required.

In step 94, a mailbox is accessed by using the mailbox number which previously had to be entered. The service module then plays a personal deposit message by the subscriber in step 96. If during this time the star key of the used telephone is pressed, the service module proceeds to the normal

retrieval mode in step 100. Otherwise, the service module receives and stores a message from the caller in step 102.

Thus, as described above a service module is provided for use in a mobile communications system. The service module provides services to a calling user such as an answering service comprising several individual mailboxes. In various situations, the service module can automatically forward an incoming call to the desired mailbox by using an identification code to allow the user to retrieve or deposit messages. In other situations, the service module is responsive to an indicator during the call by which the user can indicate that the service module did not receive a correct identification code and is therefore required to prompt the user to enter the correct identification code. In other situations, the service module is responsive to an indicator during the call by which the user can indicate whether he/she desires to retrieve a message from his/her mailbox or to deposit a message in another user's mailbox.

It should be noted that the present invention is not limited to the embodiment as described hereinabove. In particular, the steps taken by the service module may well be applied in a different order. It is envisaged that various modifications and variations to the above described embodiment could be made, without falling outside the scope of the present invention which is to be determined from the appended claims.

CLAIMS:

1. Apparatus for use in a mobile communications system, said mobile communications system being arranged to establish a communications link with said apparatus on receipt of a call from a user who is to receive a message service from said apparatus relating to a mobile subscriber, said mobile subscriber being associated with an identification code, said apparatus comprising:

means for prompting said user for said identification code if said identification code is unknown by said apparatus;

means responsive to receipt of said identification code for selecting said mobile subscriber to which the message service will relate;

means responsive to receipt of an indicator from said user during said call; and

means for providing a first message service to said user in the absence of receipt of said indicator, or a second message service on receipt of said indicator.

2. Apparatus according to claim 1, wherein said apparatus is arranged to provide an answerphone service for receiving and storing a voice message from said user, and for retrieving a stored voice message and providing said retrieved voice message to said user.

3. Apparatus according to claim 2, wherein said answerphone service comprises a mailbox which is associated with said mobile station by said identification code.

4. Apparatus according to claim 3, wherein said first message service comprises one of

(a) entering a message retrieve mode, said message retrieve mode enabling said user to retrieve a voice message from said mailbox; and

(b) entering a message deposit mode, said message deposit mode enabling said user to deposit a voice message on said mailbox;

and said second message service comprises the other of (a) and (b).

5. Apparatus according to any of claims 1 to 3, wherein said first message service comprises one of

(a) providing a message intended specifically for the subscriber of a mobile station from which said call is made; and

(b) providing a message intended specifically for a different subscriber than the subscriber of said mobile station from which said call is made;

and said second message service comprises the other one of (a) and (b).

6. Apparatus according to claim 5, wherein (a) further comprises:

retrieving a first voice message from said mailbox associated with the subscriber of said mobile station; and

providing said user with said first voice message.

7. Apparatus according to claim 5 or 6, wherein (b) further comprises:

retrieving a second voice message from a mailbox associated with said different subscriber; and

providing said user with said second voice message.

8. Apparatus according to any preceding claim, wherein said call is associable with a divert flag, a calling line identity (CLI) signal, said identification code and an international address prefix, wherein said divert flag is set if said call is diverted from a mobile station to said apparatus and said mobile station is located within a coverage area of said mobile communications system, said CLI signal is associated with said call if the call originates or is diverted from a mobile station within said coverage area and said mobile station is preset to transmit said CLI signal, said identification code is associated with said call if said identification code was received by said apparatus, and said international address prefix is associated with said

call if said call originates or is diverted from a mobile station and said mobile station is used at a location where said international address prefix is required to access said mobile communications system.

9. Apparatus according to claim 8, wherein said answerphone service is operable in a normal deposit mode if said divert flag is set, and in said normal deposit mode said user is prompted for said voice message to be received and stored.

10. Apparatus according to claim 8 or 9, wherein said answerphone service is operable in a normal retrieve mode if:

(a) said divert flag is not set and said CLI signal is associated with said call; or

(b) said divert flag is not set, said CLI signal is not associated with said call, and said identification code and said international address prefix are associated with said call, and

in said normal retrieve mode said stored voice message is retrieved and provided to said user.

11. Apparatus according to any of claims 8 to 10, wherein said answerphone service is operable in an international mode if said answerphone service is not operated in said normal deposit mode or said normal retrieve

mode, wherein in said international mode said user is prompted for said voice message to be received and stored, and said answerphone service proceeds to said normal retrieve mode if said indicator is received from said user.

12. Apparatus according to any preceding claim, wherein said identification code corresponds to the telephone number of a mobile station.

13. Apparatus according to any preceding claim, further comprising means for prompting said user for a security code which is associated with said mobile subscriber.

14. Apparatus according to any preceding claim, wherein said identification code comprises a DTMF tone code.

15. Apparatus according to any preceding claim, wherein said indicator comprises a DTMF tone.

16. A mobile communications system comprising apparatus according to any preceding claim, said system being arranged to establish a communications link with said apparatus on receipt of a call addressed to a common directory number for said apparatus.

17. A method of providing a message service to a user of a mobile communications system on receipt of a call from said user, wherein said message service relates to a mobile subscriber associated with an identification code, and said message service comprises a first message service provided on receipt of a selection indicator by said user during said call, or a second message service provided in the absence of receipt of said indicator, said method comprising:

prompting said user for said identification code if said identification code is required to provide said message service;

selecting between said first and said second message service in dependence on receipt of said indicator; and

providing the selected message service to said user.

18. The method of claim 17, wherein said message service is associated with an answerphone service, and said mobile subscriber is associated with a mailbox for storing voice messages.

19. The method of claim 17 or 18, wherein said first message service comprises one of

(a) entering a message retrieve mode; and

(b) entering a message deposit mode;

and said second message service comprises the other of (a) and (b).

20. The method of claims 18 and 19, wherein said message retrieve mode comprises:

retrieving from said mailbox a message stored therein; and

providing said retrieved message to said user.

21. The method of claims 18 and 19, or 20, said message deposit mode comprising:

providing a message to said user prompting said user to enter a voice message; and

storing said voice message in said mailbox.

22. The method of claim 17 or 18, wherein said first response comprises one of

(a) providing a message intended specifically for the subscriber of a mobile station from which said call is made; and

(b) providing a message intended specifically for a different subscriber than the subscriber of said mobile station from which said call is made;

and said second response the other one of (a) and (b).

23. The method of claim 22, wherein (a) further comprises:

retrieving a first voice message from said mailbox associated with said subscriber of the mobile station for which the call is made; and

providing said user with said first voice message.

24. The method of claim 22 or 23, wherein (b) further comprises:

retrieving a second voice message from a mailbox associated with a different subscriber; and

providing said user with said second voice message.

25. The method of any of claims 17 to 24, wherein said identification code corresponds to the telephone number of said mobile station.

26. The method of any of claims 17 to 25, further comprising:

prompting said user for a security code associated with said mobile station.

27. The method of any of claims 17 to 26, wherein said identification code comprises a DTMF tone code.

28. The method of any of claims 17 to 27, wherein said indicator comprises a DTMF tone.

29. Apparatus for use in a mobile communications system, said apparatus being adapted to store messages for subsequent retrieved by a subscriber of the mobile communications system wherein said apparatus is adapted to identify a first subscriber making a call to retrieve a message by means of an identification signal automatically forwarded to said apparatus during call establishment, said signal identifying the equipment being used by said subscriber, and wherein said apparatus is further adapted to identify a second subscriber, on receipt of a request from said second subscriber during said call, by means of other information supplied by said second subscriber during said call.

30. Apparatus for use in a mobile communications system, said mobile communications system being arranged to establish a communications link with said apparatus in response to a call by a user, said apparatus being responsive during said call to receipt of a response selection indicator, and to receipt of a number of identification codes each being associated with a different mobile subscriber, wherein said apparatus is arranged to select one of said mobile subscribers and/or to select one of a plurality of predetermined responses if said response selection indicator is received, and otherwise to automatically provide a particular response relating to one of said mobile subscribers.

31. Apparatus for a mobile communications system substantially as hereinbefore described, in particular with reference to the accompanying drawings.

32. A method of providing a message service in a mobile communications system substantially as hereinbefore described, in particular with reference to the accompanying drawings.

ABSTRACT

A service module is provided for use in a mobile communications system. The service module provides services to a calling user such as an answering service comprising several individual mailboxes. In various situations, the service module can automatically forward an incoming call to the desired mailbox by using an identification code to allow the user to retrieve or deposit messages. In other situations, the service module is responsive to an indicator during the call by which the user can indicate that the service module did not receive a correct identification code and is therefore required to prompt the user to enter the correct identification code. In other situations, the service module is responsive to an indicator during the call by which the user can indicate whether he/she desires to retrieve a message from his/her mailbox or to deposit a message in another user's mailbox.

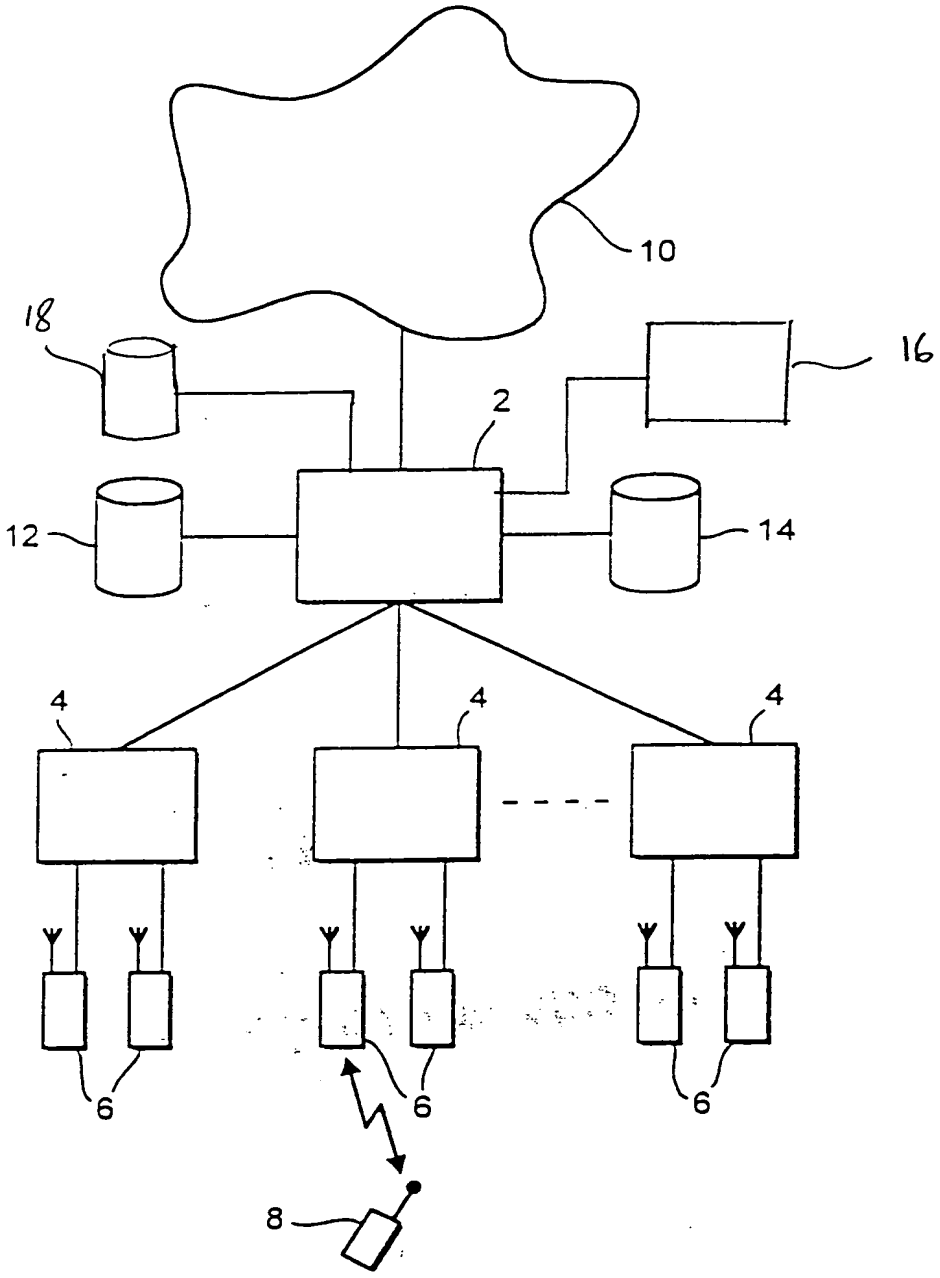

FIG. 1

VPS overview

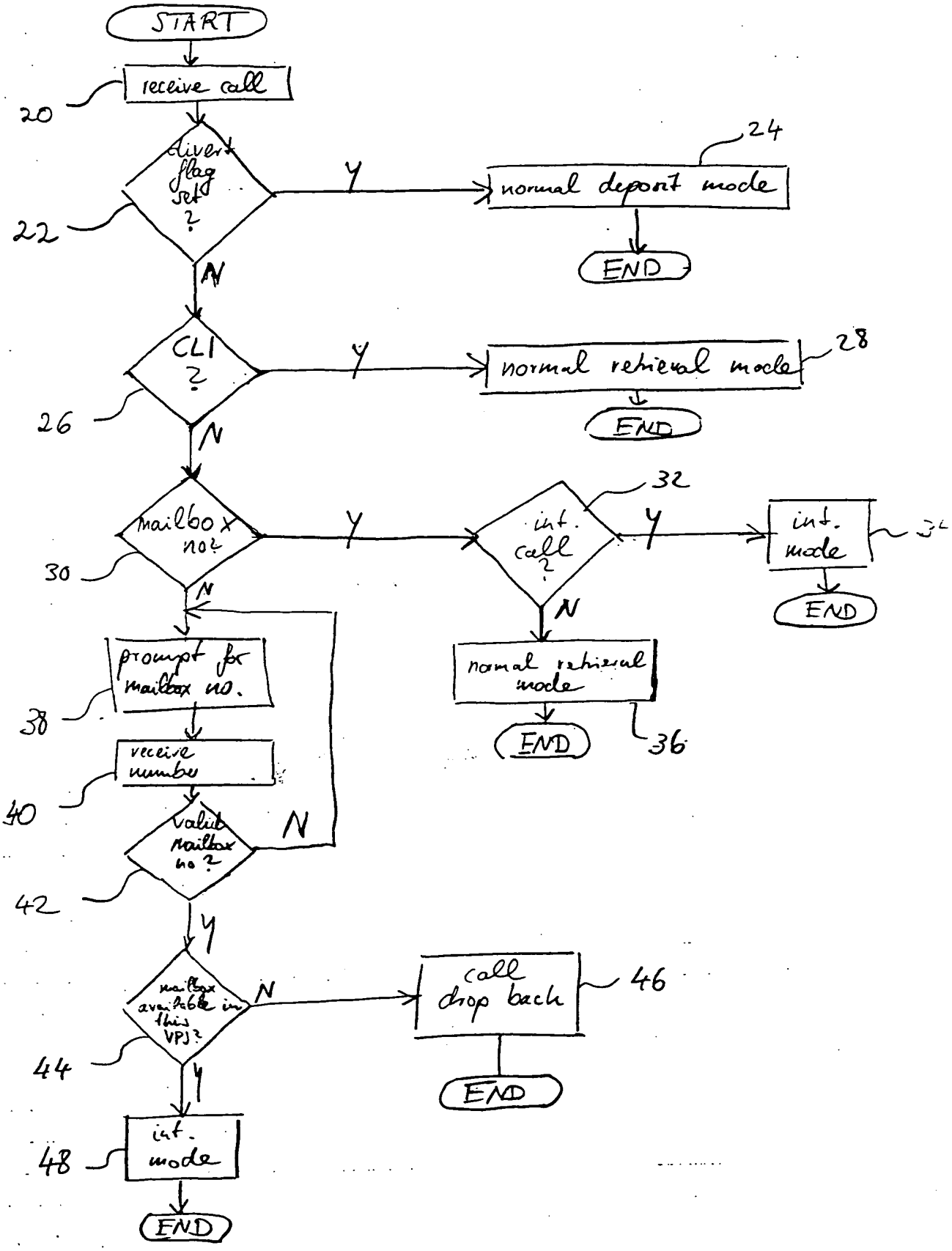

Figure 2

Normal deposit mode

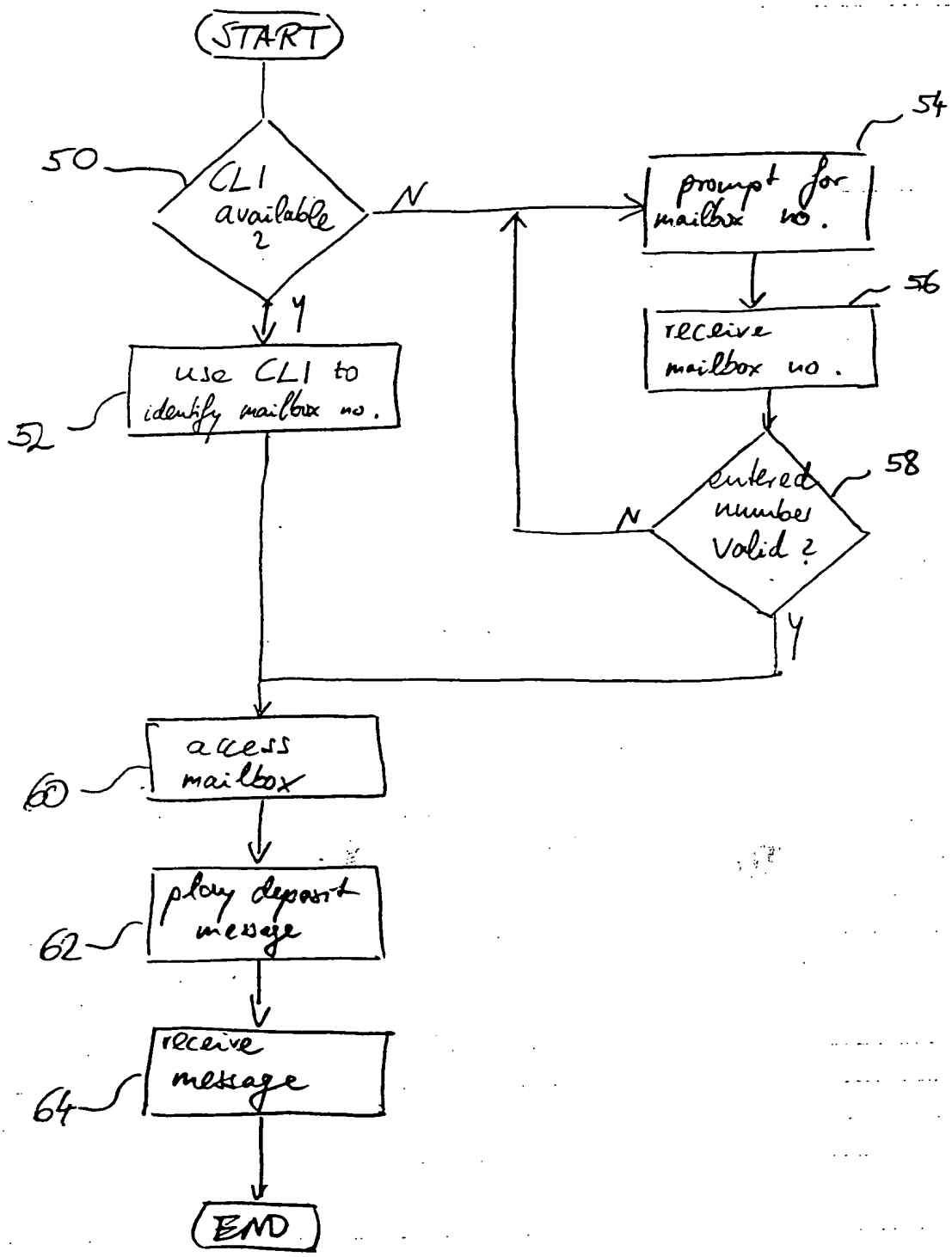

figure 3

Normal retrieval mode

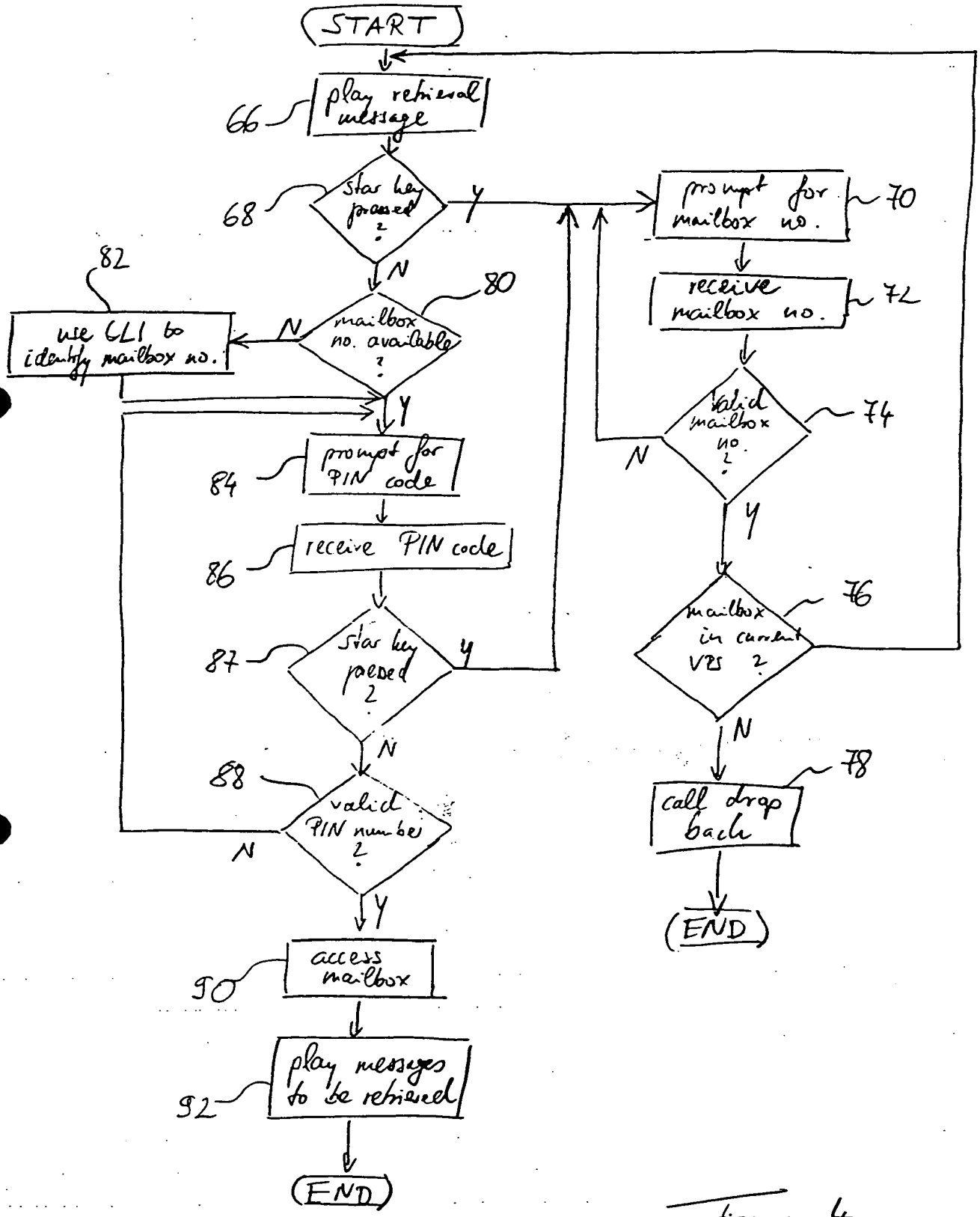

figure 4

Interactional mode
(deposit + retrieval)

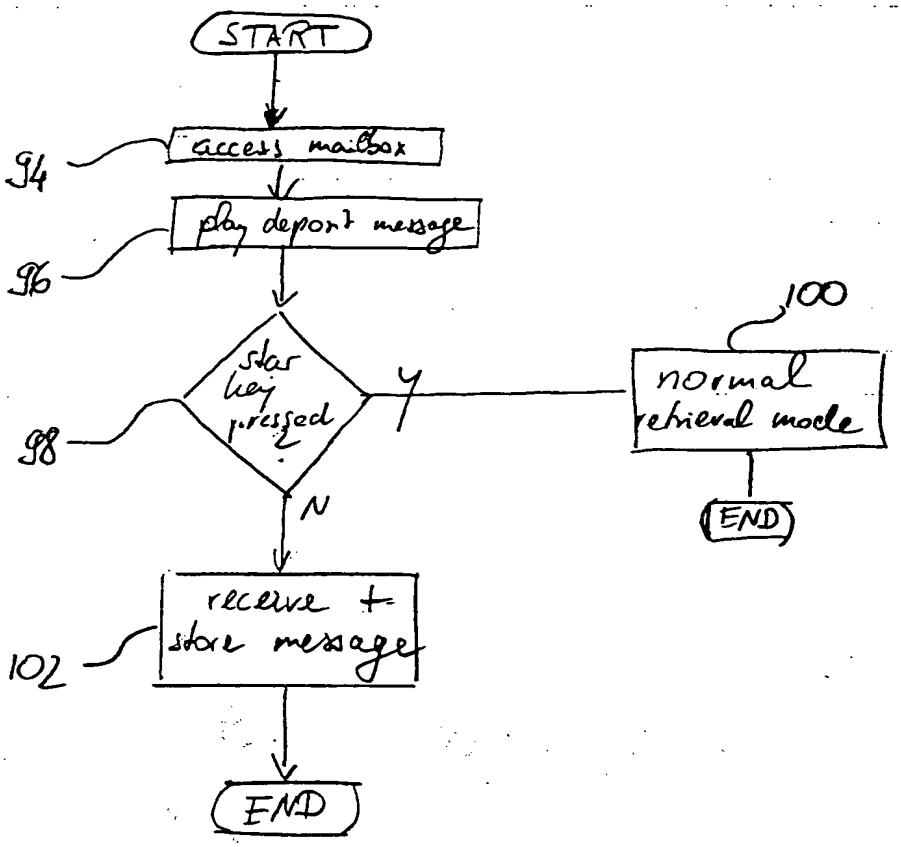

Figure 5

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R. G. C. Jenkins & Co.

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